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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,694	07/13/2001	Narihiro Tahara	1403-0212P	9156

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EXAMINER

WYROZEBSKI LEE, KATARZYNA I

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 04/21/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/903,694

Applicant(s)

TAHARA ET AL.

Examiner

Katarzyna Wyrozebski Lee

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1714

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kent (US 4,100,122).

Table 2 (col. 5) of the prior art of Kent discloses composition comprising:

Polyisoprene rubber	100 pbw
Fiber glass	40 pbw
Silica	40-80 pbw
Parawax	20-25 pbw
Clay	10 pbw

According to the description of the above components, the particle size of clay is less than 2 microns (col. 3, line 16). Since clay is one of the inorganic powders required by the present claims, therefore its Mohs hardness has to be inherently lower than 6.5.

PARAWAX is a wax that is utilized to provide easier moldability (Abstract), and to improve the flow characteristics of the composition during the preparation thereby giving a better dispersion of glass fibers (col. 3, lines 35-38). The definition of softener (see attached copy of the chemical dictionary) is "a substance used when dry powder are added to a polymeric

Art Unit: 1714

material (e.g. rubber or plastic) to reduce friction of mechanical mixing and to facilitate subsequent processing. It exerts both lubricating and dispersing action..." Wax therefore satisfies the definition of softener.

In the light of the above disclosure, the prior art of Kent anticipates requirements of claims rejected above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 1714

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholl (US 5,663,226).

The composition of the prior art of Scholl comprises rubber, such as SBR rubber and silica reinforcing filler (Table col. 8). The composition further comprises, in addition to reinforcing agent, a filler (Abstract).

Suitable fillers of Scholl include (col. 4, lines 44-65) silicates having particle size of 100-400 nm, natural silicates and glass fibers. The above fillers are utilized in an amount of 0.05-20 pbw preferably 0.1-10 pbw (col. 5, lines 10-12). The specification of Scholl further suggests or teaches use of softeners. Since silicates of the prior art of Scholl are also required by the claims of the present invention, their Mohs hardness will therefore be an intrinsic property.

Although the prior art of Scholl does not specifically disclose that two fillers, which are utilized are glass fiber and silicate and that they are utilized together, such combination would be an obvious modification. It is well settled that it is prima facie obvious to combine two

Art Unit: 1714

ingredients, each of which is targeted by the prior art to be useful for the same purpose. *In re Linder* 457 F,2d 506,509, 173 USPQ 356, 359 (CCPA 1972).

In the light of the above disclosure it would have been obvious to one having ordinary skill in the art at the time of the instant invention to utilize both glass fibers and silicate in the composition of Scholl and thereby arrive at the present invention since it is prima facie obvious to combine two ingredients, each of which is targeted by the prior art to be useful for the same purpose.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,277,902 and US 6,025,415 both to Scholl disclose the same information as the prior art already applied in paragraph 6. US 2002/0037950 to Mizuno and US 2002/0132904 to Langstein do not qualify as a prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski Lee whose telephone number is (703) 306-5875. The examiner can normally be reached on Mon-Thurs 6:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Art Unit: 1714

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Katayama Jiyunobu-ke
KIWL

KIWL

April 17, 2003

Use: Deodorant and antiperspirant.

sodium zirconium sulfate. See zirconium sodium sulfate.

soft. A nontechnical word used by chemists in several senses, it describes the following: (1) an acid having little or no positive charge and whose valence electrons are easily excited (see acid); (2) water that is relatively free from calcium compounds (see water, hard); (3) wood from coniferous trees (see softwood).

softener. (1) A substance used when dry powders are added to a polymeric material (e.g., rubber or plastic) to reduce the friction of mechanical mixing and to facilitate subsequent processing. It exerts both lubricating and dispersing action, often by means of emulsification. Examples are vegetable oils, asphaltic materials, and stearic acid, the latter being especially effective with carbon black. It is difficult to distinguish precisely between softeners and plasticizers; in general, softeners do not enter into chemical combination with the polymer, and their softening effect tends to be temporary. (2) A fatliquoring agent used to soften leather. (3) A sulfonated oil, fatty alcohol, or quaternary ammonium compound used in textile finishing to impart superior "hand" to the fabric and facilitate mechanical processing. (4) A substance that reduces the hardness of water by removing or sequestering calcium and magnesium ions; among those used are various sodium phosphates and zeolites. See water, hard.

"Softigen" [Creanova]. TM for fatty acid esters.
See "Witepsol."

"Softisan" [Creanova]. TM for fatty acid esters.
See "Witepsol."

softwood. In papermaking terminology, an arbitrary name for the wood from coniferous trees (pine, spruce, fir, hemlock) regardless of the hardness or softness of the wood itself. Softwoods are used for almost all commercial grades of paper.
See pulp, paper.

soil. (1) A mixture of inorganic matter derived from weathered rocks and organic components resulting from decay of prior vegetation. Eight elements are present in the inorganic component in excess of 1% (oxygen, silicon, aluminum, iron, calcium, potassium, magnesium, and sodium), most in the ionized state. Water and air are also present, either in the voids between the particles or adsorbed on their surfaces. Many other elements occur in lower percentages, including trace elements in concentration of less than 1000 ppm. Some of these, e.g., boron (about 20 ppm), are essential for plant

nutrition. Both nitrogen and phosphorus are associated with the organic content. The concentration of these is a fraction of 1% of each, but they play a vital part in plant and animal life. The pH of soils varies widely with location; some soils are as low as pH 4.5 (very acid) and others as high as pH 10 (strongly alkaline). For most crops the pH ranges around the neutral point (6.5–7.5). Texturally, soils are classified on the basis of their content of sand, silt, and clay. Those having 45–50% sand and 20–28% clay are called loams, those with more than 50% sand are called sandy, and those with more than 28% clay are in the clay group. Technologists consider soil as being made up of layers, known as horizons, each having a characteristic composition and physical properties; the spectrum of these horizons is called the soil profile. Organic matter is usually excluded from the profile.

(2) In textile literature, any foreign matter present in or on fiber or fabric, i.e., dirt, oil, grease, etc. These are usually removable by the action of soap, synthetic detergents, or organic solvents.

soil conditioner. (1) A synthetic, long-chain organic molecule having carboxyl groups along the chain whose charges react with the positive charges on the soil particles (aluminum and iron). The conditioners affect the anion exchange capacity of a soil. (2) Loosely, any material added to topsoil to reduce acidity (lime) and promote growth (bone meal).

"Soilfume" [FMC]. TM for a soil fumigant whose active ingredient is ethylene dibromide.
Hazard: As for ethylene dibromide.

sol. (1) An abbreviation for soluble. (2) A class of colloid.
See colloidal; colloid chemistry.

solan. (generic name for 3'-chloro-2-methyl-*p*-valerolulide or *N*-(3-chloro-4-methylphenyl)-2-methylpentanamide).

CAS: 2307-68-8.
 $H_3CC_6H_4(Cl)NHCOCH(CH_3)CH_2CH_2CH_3$

Properties: Solid. Mp 86C. Insoluble in water; soluble in pine oil, diisobutyl ketone, isophorone, and xylene. Combustible.

solanine.

CAS: 20562-02-1. $C_{45}H_{73}NO_{13}$. An alkaloid found in low percentages in potato and other plants, insoluble in water, soluble in alcohol, decomposes at 285C.

solar cell. (photovoltaic cell). A battery-like device in which the radiant energy of the sun is converted to electrical energy by means of a semiconductor. The essential component of a solar cell is a thin sheet or wafer of crystalline or amorphous silicon, plus doping agents. The crystalline form is used in 3-inch squares, but the hydrogenated amorphous form is effective in 1-foot squares which are produced as vapor-deposited coatings on glass only